

**JET ENGINE/TEST CELL**

**(F-16)**

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1. **Objective.** As prescribed in AFI 38-201, *Determining Manpower Requirements*, this Air National Guard Manpower Standard (ANGMS) quantifies the manpower required to accomplish the tasks described in the work center description for varying levels of workload.
  2. **Authority.** Air National Guard Regulation 66-14, *Maintenance Management*, 13 July 1988, contains policy and procedural guidance for the Jet Engine/Test Cell/Engine Management work center. This ANGMS has been developed in accordance with functional review procedures contained in AFPAM 38-208V1, *Air Force Management Engineering Program (MEP) Processes*, (formerly AFR 25-5).
  3. **Applicability.** Applies to ANG F-16 Fighter Wings, Groups, and the 114th Fighter Squadron. Excludes the 162nd Fighter Group and the 184th Fighter Group. This standard applies only to peacetime operations.
  4. **Standard Data:**
    - a. Classification. Type II.
    - b. Approval Date. 1 August 1992.
    - c. Man-hour Data Source. Operational Audit method (historical record and technical estimate techniques).
    - d. Standard Man-hour Equation.  $Y = 796.6 + 5.629X$ .
    - e. Workload Factor:
      - (1) Title. A Programmed Flying Hour.
      - (2) Definition. The average monthly programmed flying hours.
      - (3) Source. USAF Program Document, Volume II, maintained by NGB/FM.
  5. **Application Instructions:**
    - a. The valid man-hour range for this ANGMS is 2159.83 through 4209.03.
    - b. This ANGMS is appropriate for use with all peacetime civilian man-hour availability factors.
    - c. Determine the whole manpower requirements for this work center and refer to the appropriate column in the standard manpower table at attachment 2 to determine the required specialties.
  6. **Statement of Conditions:**
    - a. There were no general conditions (environmental, equipment, or facility) which had an impact on the development or application of this manpower standard.
    - b. There were no approved enhancements that impacted the man-hour equation for this work center.

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**2 Attachments**  
1. Work Center Description  
2. Standard Manpower Table

**WORK CENTER DESCRIPTION****Jet Engine/Test Cell****(F-16)****DIRECT:****1. JET ENGINE INTERMEDIATE MAINTENANCE:**

**1.1. MAINTAINS TURBOFAN POWER PLANT SYSTEM.** Inspects, troubleshoots, modifies, and repairs equipment.

**1.1.1. PERFORMS POWER PLAN MODULE REMOVAL AND INSTALLATION.**

**1.1.2. MAINTAINS INLET AND FAN MODULE.**

**1.1.3. MAINTAINS CORE ENGINE MODULE.**

**1.1.4. MAINTAINS FAN DRIVE TURBINE MODULE.**

**1.1.5. MAINTAINS AUGMENTOR DUCT AND NOZZLE MODULE.**

**1.1.6. MAINTAINS AND OVERHAULS AUGMENTOR DUCT AND NOZZLE.**

**1.1.7. MAINTAINS GEARBOX MODULE.**

**1.1.8. MAINTAINS FUEL AND CONTROL SYSTEM.**

**1.1.9. MAINTAINS DIGITAL ELECTRONIC ENGINE CONTROL (-220 AND -220E ONLY).**

**1.1.10. MAINTAINS OIL SYSTEM.**

**1.1.11. MAINTAINS ELECTRICAL SYSTEM.**

**1.1.12. MAINTAINS ENGINE DIAGNOSTIC UNIT (-220 AND -220E ONLY).**

**1.1.13. MAINTAINS AUGMENTOR NOZZLE ACTUATOR SYSTEM.**

**1.1.14. MAINTAINS HARDWARE INSTALLED AT FINAL ASSEMBLY.**

**1.1.15. MAINTAINS BASIC F-100 TURBOFAN ENGINE.**

**1.1.16. MAINTAINS ENGINE INSTRUMENT SYSTEM.**

**1.2. MAINTAINS ENGINE STARTING SYSTEM.**

**1.3. PERFORMS INSPECTION.** Performs special or phase inspection.

**1.3.1. PERFORMS SPECIAL INSPECTION.**

**1.3.2. PERFORMS PHASE INSPECTION.**

2. **GENERAL SHOP SUPPORT.** Performs shop support task to include local manufacture item.
  - 2.1. **PERFORMS BUILDUP AND TEAR DOWN OF ENGINE.**
  - 2.2. **PREPARES ENGINE FOR STORAGE OR SHIPMENT.**
3. **ENGINE RUN-UP.** Performs engine run-up to include trim using Automated Ground Engine Test System, vibration troubleshooting, and Engine Monitoring System.
  - 3.1. **PERFORMS INSTALLED ENGINE TRIM RUN.**
  - 3.2. **PERFORMS UNINSTALLED ENGINE RUN.**
  - 3.3. **PERFORMS INSTALLED OPERATIONAL CHECK RUN.**
4. **NONPOWERED AEROSPACE GROUND EQUIPMENT (AGE) AND SHOP INDUSTRIAL EQUIPMENT.** Inspects and repairs nonpowered AGE and shop industrial equipment.
5. **AIRCRAFT DOCUMENTATION ADMINISTRATION.** Prepares and maintains aircraft documentation.
6. **TECHNICAL DATA SUBACCOUNT MAINTENANCE.** Receives and posts data and change to file. Maintains file for serviceability.
7. **TIME COMPLIANCE TECHNICAL ORDER (TCTO) MAINTENANCE.** Performs maintenance required on and off the aircraft in accordance with applicable TCTO and completes documentation.
8. **HUSH HOUSE SYSTEM.** Analyzes malfunction, troubleshoots system, performs repair, performs inspection, performs modification, and operates equipment to determine condition.
  - 8.1. **MAINTAINS ELECTRICAL DRIVEN GENERATOR SET.**
  - 8.2. **MAINTAINS B-8 RECTIFIER.**
  - 8.3. **MAINTAINS TEST CONTROL CAB/STAND AM37T-10.**
  - 8.4. **MAINTAINS HUSH HOUSE AF37T-10.**
  - 8.5. **MAINTAINS HALON FIRE SUPPRESSION SYSTEM.**
  - 8.6. **PERFORMS INSPECTION:**
    - 8.6.1. **PERFORMS DAILY INSPECTION.**
    - 8.6.2. **PERFORMS 30-DAY INSPECTION.**
    - 8.6.3. **PERFORMS 180-DAY INSPECTION.**
  - 8.7. **MAINTAINS ENGINE DATA COLLECTION UNIT AND ENGINE ANALYZER (220/220E ONLY).**
9. **UNIT TRAINING ASSEMBLY (UTA) PREPARATION.** Performs planning and scheduling task associated with preparation for UTA.

**INDIRECT:** Indirect work involves those tasks that are not readily identifiable with the work center's product or service. The major categories of Standard Indirect work are Supervision, Administration, Meetings, Training, Supply, Equipment Maintenance, and Cleanup. See AFMS 00AA for the standard indirect description.

STANDARD MANPOWER TABLE											
WORK CENTER/FAC Jet Engine/Test Cell/Engine Management 23210D			APPLICABILITY MAN-HOUR RANGE  2159.83 - 4209.03								
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Systems Aerospace Propulsion	454X0	Civ	3	3	3	3	3	3	3	3	4
	454X0A	Civ	12	13	14	15	16	17	18	19	19
TOTAL			15	16	17	18	19	20	21	22	23
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Systems Aerospace Propulsion	454X0	Civ	4	4	5	5	5				
	454X0A	Civ	20	21	21	22	23				
TOTAL			24	25	26	27	28				

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